

## 6.0 NEIGHBORHOODS, COMMUNITY SERVICES AND ENVIRONMENTAL JUSTICE

This chapter provides an assessment of potential impacts to neighborhoods, community facilities and special populations located within the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE). Neighborhoods within the study area are described and community facilities are identified. Potential direct effects to communities and special populations are discussed in terms of the long-term direct effects associated with the alternatives under study in this Draft Environmental Impact Statement (EIS).

### 6.1 Affected Environment

The following sections describe the existing conditions of corridor neighborhoods; community services and social service providers; and environmental justice communities of concern. The study area for the assessment of neighborhoods includes all neighborhood statistical areas (NSAs) located adjacent to the proposed project corridor. The study area for the assessment of environmental justice populations includes census tracts located within or adjacent to the proposed project corridor. Existing community facilities within ½-mile of the proposed project corridor were identified. The environmental justice study area is defined as any census tract partially or wholly within ½-mile of the proposed alignments. Data was collected at the block group level for the study area and for Mecklenburg County for comparative purposes (including for minority households, transit-dependent populations and low-income households) and was aggregated to the Census Tract level for presentation within this Draft EIS. The entire county was selected as the appropriate comparison tool because of the potential regional influence of this proposed project and because it best represents the regional project area.

#### 6.1.1 Neighborhoods

Descriptions of study area neighborhoods are based on site visits, aerial photography and the *Charlotte Neighborhood Quality of Life Study 2008*, completed for the City of Charlotte Neighborhood Development and the Charlotte-Mecklenburg Planning Commission by the University of North Carolina at Charlotte's (UNC Charlotte's) Metropolitan Studies Group. The *Charlotte Quality of Life Study 2008* is the most recent in a series of studies conducted to evaluate living conditions in Charlotte's neighborhoods. The study report includes a profile for each of the city's 173 NSAs and rates each neighborhood's condition and quality of life relative to those in other NSAs (using the following dimensions to develop neighborhood profiles: social, physical, crime, and economic conditions).

Overall, the Northeast Corridor has relatively healthy neighborhoods and none of the neighborhoods located along the proposed project corridor are identified as "challenged." Table 6-1 presents the results of the *Charlotte Neighborhood Quality of Life Study 2008* for the neighborhoods in the Northeast Corridor study area. The neighborhoods adjacent to the proposed Light Rail Alternative and Light Rail Alternative – Sugar Creek Design Option are presented generally in geographic order from Center City Charlotte to the Mecklenburg-Cabarrus County line and are also shown in Figure 6-1.

Following Table 6-1 is a brief description of each neighborhood located within the study area. Calculations for the percentage of persons within a specific neighborhood with access to transit are based on the percentage of NSA residents living within walking distance (¼-mile) of a bus-stop. Pedestrian friendliness of each neighborhood was rated by comparing the total length of sidewalks to the total length of streets within each neighborhood. The data and calculations are from the *Charlotte Neighborhood Quality of Life Study 2008*.

**Table 6-1**  
**Summary of Northeast Corridor Neighborhood Demographics and Quality of Life Index**

NSA	Neighborhood	Population	Median Household Income	Average Home Value	Overall Quality of Life	Trend Change 2002-2008
67	First Ward	2,172	\$32,776	\$314,023	Stable	No Change
32	Fourth Ward	3,006	\$47,357	\$316,706	Stable	Trending Up
51	Belmont	2,487	\$26,215	\$97,308	Stable	Trending Up
45	Optimist Park	733	\$24,597	\$109,614	Stable	Trending Up
35	Lockwood	921	\$22,321	\$75,262	Transitioning	Trending Up
46	Villa Heights	2,332	\$31,452	\$87,837	Transitioning	Trending Up
36	Tryon Hills	2,172	\$29,170	\$53,681	Transitioning	Trending Up
48	Plaza-Shamrock	3,513	\$32,806	\$93,462	Transitioning	No Change
44	North Charlotte	3,443	\$29,231	\$201,820	Stable	Trending Up
40	Sugaw Creek/ Ritch Avenue	2,666	\$29,785	\$95,897	Transitioning	Trending Up
142	Shannon Park	7,110	\$39,523	\$87,892	Transitioning	No Change
141	Hampshire Hills	6,055	\$40,389	\$85,318	Transitioning	Trending Down
140	Hidden Valley	12,127	\$34,746	\$70,867	Transitioning	No Change
139	Newell South	2,240	\$47,743	\$140,536	Transitioning	Trending Down
133	Mineral Springs/ Rumple Road	6,938	\$57,205	\$126,555	Transitioning	No Change
138	College Downs	5,779	\$38,828	\$102,230	Stable	Trending Up
134	University City South	5,200	\$35,784	\$83,173	Transitioning	No Change
132	University City North	5,994	\$59,086	\$127,768	Transitioning	Trending Up
135	Harris-Houston	7,610	\$50,776	\$120,998	Transitioning	Trending Down

Ratings are defined as follows:

- Stable – Neighborhoods identified as above average and having few neighborhood and social problems, low rates of crime, few physical needs, sound housing and high levels of economic vitality.
- Transitioning – Neighborhoods characterized as average on most dimensions but may display weakness on one or more dimensions, indicating a possible shift in the overall quality of life. Transitioning status can be of an improving or declining position, relative to other Charlotte NSAs.
- Challenged – Neighborhoods that scored low-to-moderate on all four dimensions and characteristic of a lower quality of life and “at risk” on multiple dimensions. Neighborhoods are characterized by high rates of physical deterioration, crime, social needs and low rates of income change (even declines). Challenged neighborhoods generally have a below average quality of life in comparison to other Charlotte NSAs.

A 6-year analysis (2002-2008) identified changes from the previous ratings and are generally defined as follows:

- Trending Up – Neighborhoods experiencing improvements in performance with a cumulative positive change in variable scores.
- No Change – These neighborhoods experienced slight or modest changes in scores (improving or declining).
- Trending Down – Neighborhoods that experienced declining scores for individual and cumulative variables.

Source: *Charlotte Neighborhood Quality of Life Study 2008*

#### First Ward (NSA-67)

The First Ward neighborhood is located in Center City Charlotte and is part of the High Intensity Urban Core District. The neighborhood is bound on the north and east by Interstate 277 (I-277) and extends south to East Trade Street and west to North Tryon Street/US-29. First Ward encompasses a mix of uses including offices, institutional and high-density residential. The neighborhood is also home to several community facilities including a fire station and a school. A new park, called First Ward Park, is also proposed for the neighborhood and would be an urban park within a mixed-use development between

East 7th Street, East 9th Street and North Brevard Street. The park would be constructed by a private developer as part of a public-private partnership and would also include construction of the UNC Charlotte Uptown Campus on the site. The neighborhood is well developed with sidewalks and within walking distance to many amenities within Center City Charlotte and approximately 100 percent of residents have access to public transportation.

#### Fourth Ward (NSA-32)

Fourth Ward is located northwest of First Ward in Center City Charlotte, between I-277 to the north, North Tryon Street/US-29 to the east, East Trade Street to the south and Smith Street to the west. Fourth Ward is part of the High Intensity Urban Core District and includes a mixture of land uses including both single-family and multi-family residential, and some neighborhood retail. The neighborhood also contains community facilities including a police station, a fire station and several religious institutions. The location provides walk-to-work opportunities to most of the high-rise office buildings located in Center City Charlotte and approximately 100 percent of residents have access to public transportation.

#### Belmont (NSA-51)

Belmont is located east of Center City Charlotte, just outside of I-277, within the Industrial Communities District. The neighborhood is bound by North Davidson Street to the west, Parkwood Avenue to the north, Hawthorne Lane to the east and East 10th Street to the south. The area was historically an industrial and working-class mill neighborhood and much of the historic mill housing is still present. The proximity of the neighborhood to Center City Charlotte has made it a popular area for redevelopment and in-fill housing, including industrial mill conversions throughout. The primary land use in the neighborhood is single-family residential with industrial and neighborhood commercial uses scattered throughout. The neighborhood also includes two middle schools, several parks, a greenway/trail, churches and a library. Approximately 100 percent of residents have access to public transportation.

#### Optimist Park (NSA-45):

Optimist Park is located along the west side of Belmont, adjacent to the Norfolk Southern Intermodal Facility between I-277 and 30th Street/Matheson Avenue. The neighborhood is within the Industrial Communities District and is dominated by industrial uses (primarily along the existing railway corridor), with a concentration of single-family homes in the southern portion. A few multi-family and commercial uses are scattered throughout, as well as several religious institutions. The Little Sugar Creek Greenway runs along portions of Optimist Park and a future extension of the greenway is proposed through the northern portion of the neighborhood. Approximately 100 percent of residents have access to public transportation.

#### Lockwood (NSA-35)

Lockwood is located northeast of Center City Charlotte, roughly between Graham Street, West 24th Street, the existing railway and I-277. This neighborhood is part of the Industrial Communities District, and land use in this neighborhood is primarily industrial with a small concentration of single-family residences on the western side of North Tryon Street/US-29. The neighborhood houses several religious institutions and the Charlotte Amtrak Station. The pedestrian friendliness of the neighborhood is rated as medium and approximately 100 percent of residents have access to public transportation.

#### Villa Heights (NSA-46)

Villa Heights is part of the Industrial Communities District and is located north of Belmont and east of the northern portion of Optimist Park. The neighborhood is bordered by Matheson Avenue to the north, Clemson Avenue and The Plaza to the east, Parkwood Avenue to the south and North Davidson Street to the west. The neighborhood primarily contains single-family residences, with some commercial uses fronting The Plaza and industrial uses along North Davidson Street. Cordelia Park is located in the southwestern portion of the neighborhood. The pedestrian friendliness of the neighborhood is rated as low and approximately 90 percent of residents have access to public transportation.

#### Tryon Hills (NSA-36)

Tryon Hills is located to the north of the Lockwood neighborhood and is roughly bordered by 24th Street, North Graham Street, an existing railway and North Tryon Street/US-29. Tryon Hills is part of the Industrial Communities District and contains a mixture of multi- and single-family housing bordered by

industrial uses. Tryon Hill Park is located within the neighborhood, but there are relatively few community facilities otherwise. The pedestrian friendliness of the neighborhood is rated as low; however, approximately 100 percent of residents have access to public transportation.

#### Plaza-Shamrock (NSA-48)

Plaza-Shamrock is located at the eastern edge of the Northeast Corridor and is bordered by The Plaza, Eastway Drive, East Ford Road/Shamrock Drive/Hillard Drive and Matheson Avenue. The neighborhood is not located within a specific design district due to its distance from the proposed project corridor. Land use in the neighborhood is predominantly single-family residential, with a few concentrations of multi-family residential. The neighborhood also includes small areas of commercial and industrial uses and there are two schools and several religious organizations. The pedestrian friendliness of the neighborhood is rated as low; however, approximately 100 percent of residents have access to public transportation.

#### North Charlotte (NSA-44)

North Charlotte is bordered by an existing railway corridor to the north, Eastway Drive to the east, The Plaza to the south, and Clemson Avenue and Matheson Avenue to the west. The neighborhood encompasses a mix of residential, commercial and industrial uses and is part of the Historic Urban Communities District. Much of the neighborhood is designated as a historic district (North Charlotte Historic District). In recent years, North Charlotte, particularly the NoDa community, has seen redevelopment, infill development and adaptive reuse of former mills, as well as residential renovations. The North Charlotte neighborhood also contains several community facilities including churches, schools, parks and a YMCA. The pedestrian friendliness of the neighborhood is rated as low and approximately 85 percent of residents have access to public transportation.

#### Sugaw Creek/Ritch Avenue (NSA-40)

Sugaw Creek/Ritch Avenue is located north and east of Tryon Hills and is bordered by North Graham Street, I-85, Sugar Creek Road and the existing rail corridor. The neighborhood is located within both the Historic Urban Communities District and the Established Suburban Communities District. The western portion of the neighborhood is composed of industrial and commercial uses, while the eastern portion includes single-family and multi-family residential uses. Some single-family residential uses can also be found scattered throughout the industrial and commercial uses. A school, police station and a library are also located within this neighborhood. The pedestrian friendliness of the neighborhood is rated as low and approximately 90 percent of residents have access to public transportation.

#### Shannon Park (NSA-142)

Shannon Park is located at the eastern edge of the Northeast Corridor and is bordered by The Plaza, Eastway Drive, Shamrock Drive and Tipperary Place. The neighborhood is not located within a specific design district due to its distance from the proposed project corridor. Land use in the neighborhood is predominantly single-family residential and there are several religious institutions. The pedestrian friendliness of the neighborhood is rated as low and approximately 75 percent of residents have access to public transportation.

#### Hampshire Hills (NSA-141)

Hampshire Hills is located north of North Charlotte. The neighborhood is primarily bound by North Tryon Street/US-29, Orr Road, Newell-Hickory Grove Road, The Plaza and Eastway Drive. A small western portion of the neighborhood is bordered by the existing railway, Sugar Creek Road and North Tryon Street/US-29. The neighborhood is located within the Established Suburban Communities District and is composed of residential, industrial and commercial uses. Several religious institutions and a large district park (Eastway Park) are also located within this neighborhood. The pedestrian friendliness of the neighborhood is rated as low and approximately 90 percent of residents have access to public transportation.

#### Hidden Valley (NSA-140)

Hidden Valley is located east of the Sugaw Creek/Ritch Avenue neighborhood, between Sugar Creek Road, I-85 and North Tryon Street/US-29. The neighborhood is located within the Established Suburban Communities District and consists of a core of single-family homes and multi-family complexes.

Commercial and industrial uses are located along North Tryon Street/US-29 and near the Sugar Creek Road/I-85 interchange. Hidden Valley also includes two schools, several religious institutions and the Hidden Valley Eco Park (stormwater restoration area). The pedestrian friendliness of the neighborhood is rated as low and approximately 96 percent of residents have access to public transportation.

#### Newell South (NSA-139)

Newell South is located northeast of Hampshire Hills, between Rocky River Road, Old Concord Road, Orr Road and North Tryon Street/US-29. The neighborhood is located within the Established Suburban Communities District, and land use is predominantly single-family residential, with industrial and commercial uses along North Tryon Street/US-29. Several religious institutions are located within the neighborhood and a charter high school is located along North Tryon Street/US-29. The pedestrian friendliness of the neighborhood is rated as low and 20 percent of residents have access to public transportation.

#### Mineral Springs/Rumple Road (NSA-133)

Mineral Springs/Rumple Road is located west of College Downs and University City North and directly adjacent to “the weave.” The neighborhood is bordered by I-85, North Tryon Street/US-29, W.T. Harris Boulevard, IBM Drive, Mallard Creek Road, Sugar Creek Road and North Graham Street. The neighborhood contains a large portion of the University City core commercial area and is located in an area of transition from the Established Suburban Communities District to the New Suburban Communities District. There are a variety of land uses within the neighborhood including single- and multi-family residential, office, and commercial uses, and vacant land. There is a large concentration of commercial uses at the intersection of W.T. Harris Boulevard and North Tryon Street/US-29. The pedestrian friendliness of the neighborhood is rated as low and approximately 50 percent of residents have access to public transportation.

#### College Downs (NSA-138)

College Downs is located northeast of Newell South, east of University City Blvd./NC-49 and north of Rocky River Road. A small portion of the neighborhood is located along North Tryon Street/US-29 and the neighborhood is within the New Suburban Communities District. Land uses throughout College Downs include commercial and single- and multi-family residential. However, much of the existing land use is primarily commercial and undeveloped land. There are no community facilities within this neighborhood. The pedestrian friendliness of the neighborhood is rated as low and 30 percent of residents have access to public transportation.

#### University City South (NSA-134)

University City South is located north and west of College Downs, between North Tryon Street/US-29, Mallard Creek Church Road, and University City Blvd./NC-49 and is part of the University City Core District. Institutional land uses dominate this neighborhood, with UNC Charlotte and Carolinas Medical Center-University (CMC-University) making up the northern two-thirds of the area. The southern tip of the neighborhood includes commercial and office park uses. Many of these uses are located along North Tryon Street/US-29. Residential areas include a small area of single-family residences south of W.T. Harris Boulevard and a mix of single- and multi-family residences north of UNC Charlotte along Mallard Creek Church Road. The pedestrian friendliness of the neighborhood is rated as low; however, approximately 100 percent of residents have access to public transportation.

#### University City North (NSA-132)

University City North is located north and west of University City South and is part of the University City Core District. The neighborhood is bordered by Interstate I-85, Interstate I-485, North Tryon Street/US-29 and W.T. Harris Boulevard. The area includes a mix of commercial and higher-density residential uses, as well as some undeveloped land. Large commercial development can be found near the intersection of W.T. Harris Boulevard and North Tryon Street/US-29. There are no community facilities located within this neighborhood. The pedestrian friendliness of the neighborhood is rated as low; however, approximately 100 percent of residents have access to public transportation.



Harris-Houston (NSA-135)

Harris-Houston is located northeast of University City South, between North Tryon Street/US-29, the Mecklenburg-Cabarrus County line, University City Blvd./NC-49 and Mallard Creek Church Road. The neighborhood is located within the New Suburban Communities District. South of I-485, the neighborhood includes undeveloped land, industrial uses and some residential uses. However, the majority of residents within this neighborhood live on the northern side of I-485. The neighborhood also includes a large park (Kirk Farm Fields) and a greenway trail (Mallard Creek Greenway). The pedestrian friendliness of the neighborhood is rated as low and only 40 percent of residents have access to public transportation.

**6.1.2 Community Services and Social Service Providers**

Community services/facilities and social service providers include, educational, religious and healthcare facilities to public libraries, police/fire stations and post offices located within a ½-mile of the proposed Light Rail Alternative and Light Rail Alternative – Sugar Creek Design Option (Table 6-2). The evaluation of the effect of the proposed alternatives on neighborhoods and communities includes the consideration of the potential direct impacts of the project on these services/facilities, as these services contribute to the overall quality of life and sense of community in these areas.

**Table 6-2**  
**Community Services and Social Service Providers**

Facility Name	Address	Facility Type
Police Station – Headquarters	601 East Trade Street	Police Station
Fire Station #1	221 North Myers Street	Fire Station
Children & Family Services Center	601 East 5th Street	Government Facility
Carole A. Hoefner Community Services Center	610 East 7th Street	Community Center
UNC Charlotte – Uptown Campus (Existing)	220 North Tryon Street	University
Police Station - Central Division	119 East 7th Street	Police Station
First United Presbyterian Church	406 North College Street	Religious Institution
Main Branch Library	310 North Tryon Street	Library
First United Methodist Church	501 North Tryon Street	Religious Institution
Fire Station #4	525 North Church Street	Fire Station
Fire Station – Administrative Division	228 East 9th Street	Government Facility
Hal Marshall Services Center Annex	618 North College Street	Government Facility
Hal Marshall Center	700 North Tryon Street	Government Facility
First Ward Elementary School	715 North Caldwell	School
Mecklenburg County Services Center	624 College Street	Government Facility
United Baptist Association	2313 Vinyard Lane	Religious Institution
First Ward Community Center	1410 North Tryon Street	Community Center
Duncan Memorial Methodist Church	420 East 15th Street	Religious Institution
Good Shepherd Baptist Church	1139 North Alexander Street	Religious Institution
Fifteenth Street Church of God	615 East 15th Street	Religious Institution
Episcopal Diocese of North Carolina	425 East 17th Street	Religious Institution
Corinthian Missionary Baptist Church	1404 North Church Street	Religious Institution
Bethlehem Fire Baptist Church	421 East 18th Street	Religious Institution
Jerusalem Pentecostal	421 East 18th Street	Religious Institution
Belmont Center Branch Library	700 Parkwood Avenue	Library
Seigle Avenue Church of God	1620 Seigle Avenue	Religious Institution
Villa Heights Elementary School	800 Everett Place	School
Greater Myers Pentecostal Church	606 Jordan Place	Religious Institution
First Mount Calvary Baptist	209 West 28th Street	Religious Institution
New Life Theological Seminary	3117 Whiting Avenue	Religious Institution
Highland Mill Montessori School	3201 Clemson Avenue	School
Johnson Branch YMCA	3025 North Davidson Street	YMCA
CMC Health Center	3025 North Davidson Street	Medical Center
Fire Station #7	3210 North Davidson Street	Fire Station
Union Missionary Baptist Church	721 East 35th Street	Religious Institution
Church of Jesus Christ of Latter-Day Saints	600 East 36th Street	Religious Institution
North Charlotte Presbyterian Church	719 East 36th Street	Religious Institution

**Table 6-2 (continued)**  
**Community Services and Social Service Providers**

Facility Name	Address	Facility Type
Spencer Memorial Methodist Church	1025 East 36th Street	Religious Institution
Plaza Road Pre-K School	1000 Anderson Street	School
Mount Caramel Church of God	3901 The Plaza	Religious Institution
Zion Primitive Baptist	827 Sugar Creek Road	Religious Institution
Highland Renaissance Academy	125 West Craighead Road	School
Joblink Center	4045 North Tryon Street	Government Facility
Sugar Creek Branch Library	4045 North Tryon Street	Library
Police Station - North Tryon Division	4045 North Tryon Street	Police Station
Hispanic Church/Faith Based Facility	4409 North Tryon Street	Religious Institution
The Vietnamese Baptist Church	4301 Howie Circle	Religious Institution
Mount Zion Church of God Holiness	4600 The Plaza	Religious Institution
Faith Christian Methodist Church	457 Wellingford Street	Religious Institution
CMC – Northpark	251 Eastway Drive	Medical Center
Crossroads Charter High School	5500 North Tryon Street	School
Iglesia Pentecostes Church	5714 Old Concord Road	Religious Institution
Harbor Baptist Church	5801 Old Concord Road	Religious Institution
Center for Community Transitions	6000 Old Pineville Road	Government Facility
Greenville Memorial Zion Church	6116 Montith Drive	Religious Institution
Kingdom Purpose Church	6108 North Tryon Street	Religious Institution
New Direction Church	6201 Elgywood Lane	Religious Institution
Christ Gospel Church	312 Tom Hunter Road	Religious Institution
Landmark Baptist Church	400 Tom Hunter Road	Religious Institution
Gloryland Baptist Church	3001 Gloryland Avenue	Religious Institution
U.S. Post Office – North Tryon	6700 North Tryon Street	Post Office
Camino Del Rey Ministries	133 Stetson Drive	Religious Institution
New Hampton Presbyterian	201 Hampton Church Road	Religious Institution
Police Station – University City Division	8401 University Executive Park Drive	Police
Department of Motor Vehicles	8446 North Tryon Street	Government Facility
Fire Station #27	111 Ken Hoffman Road	Fire Station
University City Regional Branch Library	301 East W.T. Harris Boulevard	Library
CMC-University	8800 North Tryon Street	Medical Center
UNC Charlotte	9201 University City Boulevard	University

### 6.1.3 Environmental Justice

To comply with Executive Order 12898, the presence of minority and low-income persons in the study area was determined. In addition, concentrations of transit-dependent populations, such as the elderly, children, and households without a vehicle, were identified. Concentrations of minorities and other special population groups near the proposed project corridor were identified through analysis of the 2000 U.S. Census data at both the County and census tract level. The individual tract data were compared to the countywide data to determine if any of the tracts would qualify as having large concentrations of one or more special populations. These concentrations are referred to as communities of concern.

Communities of concern were identified as those census tracts with either a large concentration of minority residents or median income levels substantially lower than the county-wide median income. A tract was categorized as having a community of concern if:

- Minority population within that tract was greater than or equal to 49 percent of total tract population; or,
- Median income for that tract was less than \$40,463 (80 percent of the 2000 Mecklenburg County median income).

Table 6-3 lists the 2000 census tracts that are located within the ½-mile study area and indicates whether high concentrations of minority and/or low-income residents were present. This information is also shown in Figure 6-2. In addition, the median household incomes listed in Table 6-3 may not be the same as the ones listed in Table 6-1. The median household incomes in Table 6-1 were based on neighborhood NSA boundaries from the *Charlotte Neighborhood Quality of Life Study 2008*. The median household incomes listed in Table 6-3 are based on census tracts with different boundaries for the defined neighborhoods.

As shown in Table 6-3, 16 of the 19 census tracts in the proposed project corridor include communities of concern. The census tracts in the southern portion of the study area generally meet the threshold for both minority and low-income residents. The communities of concern identified in the northern portion of the study area meet the threshold for low-income.

In addition to communities of concern, special populations of interest include transit-dependent populations. Generally, the elderly, children, zero-car households, and low-income populations are considered to be transit-dependent. These categories are not mutually exclusive and the different types of data are not consistent by one type of population unit (i.e., some information is by individual, some by household, some by housing unit). Therefore, it was not possible to correlate the data to obtain an accurate composite number of transit-dependent individuals for each tract. Instead, Table 6-3 includes the first three indicators for transit dependency by census tract. These transit-dependent neighborhoods are shown in Figure 6-2. The threshold for the transit-dependent categories is if the percentage of the population of a particular group within a tract is at least 10 percent greater than the percentage of that population in the county. These criteria resulted in the following threshold values for transit dependency:

- The elderly population (age 65 and older) within a tract is greater than or equal to 19 percent of total tract population (Note: none of the census tracts were comprised of an elderly population and this category is therefore not included in Table 6-3);
- The youth population (age 0 to 17) within a tract is greater than or equal to 35 percent of total tract population;
- The percentage of zero-car housing units (based on occupied housing units) within a tract is greater than or equal to 17 percent; and,
- Median income for that tract is equal to or less than \$40,463 (80 percent of the 2000 Mecklenburg County median income).



**Table 6-3**  
**Communities of Concern within the Study Area**

Neighborhood	Census Tract	Total Pop-ulation	Total Minority Pop-ulation	% Minority Pop-ulation	Median House- hold Income	% Elderly	% Youth	% Zero-Car Housing Units	Communities of Concern		Large Concentration of Transit-Dependent	
									Minority	Low-Income	Youth	Zero-Car
First Ward	6	1,711	1,417	83%	\$14,338	5%	17%	26%	●	●		●
	1	1,147	442	39%	\$35,385	12%	2%	28%	●	●		●
Fourth Ward	5	2,388	1,270	53%	\$36,711	11%	13%	25%	●	●		●
Belmont	8	3,099	2,991	97%	\$16,995	5%	40%	44%	●	●	●	●
Optimist Park	7	627	614	98%	\$25,233	6%	24%	19%	●	●		●
Lockwood/ Tryon Hills	52	3,056	2,930	96%	\$26,230	9%	30%	32%	●	●		●
Villa Heights	9	2,172	2,103	97%	\$28,173	9%	30%	22%	●	●		●
Plaza-Shamrock	13	4,288	2,657	62%	\$32,607	13%	25%	17%	●	●		●
Shannon Park	15.04	4,806	3,706	77%	\$36,625	10%	31%	12%	●	●		
North Charlotte	14	2,687	1,771	66%	\$25,762	9%	25%	22%	●	●		●
Sugaw Creek/ Ritch Avenue	53.01	2,649	2,146	81%	\$28,991	6%	23%	16%	●	●		
Hampshire Hills	15.06	6,454	5,552	86%	\$41,358	6%	28%	9%	●			
Hidden Valley	53.03	6,970	6,264	90%	\$35,203	8%	26%	10%	●	●		
	53.04	6,393	6,186	97%	\$31,633	1%	28%	18%	●	●		●
Newell South	15.05	2,875	1,188	41%	\$47,202	8%	28%	4%				
Mineral Springs/ Rumble Road/ University City North	55.07	10,240	4,252	42%	\$50,671	6%	19%	2%				
College Downs	56.05	3,718	1,428	38%	\$39,434					●		
University City South	56.04	4,880	1,779	36%	\$33,723	0%	1%	4%		●		
Harris-Houston	56.03	6,373	2,884	45%	\$52,755	1%	23%	4%				

Source: 2000 U.S. Census Data

## 6.2 Environmental Consequences

This section discusses the potential impacts of the proposed project alternatives, including the No-Build Alternative, the Light Rail Alternative and the Light Rail Alternative – Sugar Creek Design Option on neighborhoods, community facilities and environmental justice populations. Table 6-4 is a summary of neighborhood impacts.

**Table 6-4**  
**Summary of Potential Impacts on Neighborhoods**

Resource	No-Build Alternative	Light Rail Alternative	Light Rail Alternative – Sugar Creek Design Option
First Ward	No Impact	No Impact	(n/a)
Fourth Ward	No Impact	No Impact	n/a
Belmont	No Impact	No Impact	n/a
Optimist Park	No Impact	No Impact	n/a
Lockwood	No Impact	No Impact	n/a
Villa Heights	No Impact	No Impact	n/a
Tryon Hills	No Impact	No Impact	n/a
Plaza-Shamrock	No Impact	No Impact	n/a
Shannon Park	No Impact	No Impact	n/a
North Charlotte	No Impact	Potential Impact (VA)	n/a
Sugaw Creek/Ritch Avenue	No Impact	No Impact	n/a
Hampshire Hills	No Impact	No Impact	No Impact
Hidden Valley	No Impact	Potential Impact (NV)	Potential Impact (N)
Newell South	No Impact	No Impact	n/a
Mineral Springs/Rumple Road	No Impact	No Impact	n/a
College Downs	No Impact	No Impact	n/a
University City South	No Impact	Potential Impact (AD, NV, VA)	n/a
University City North	No Impact	No Impact	n/a
Harris-Houston	No Impact	Potential Impact (VA)	n/a

n/a Indicates that the Light Rail Alternative – Sugar Creek Design Option is not located within the neighborhood

AD Indicates impacts from acquisitions and displacements

NV Indicates impacts from noise and vibration

VA Indicates impacts to visual and aesthetic environment

### 6.2.1 No-Build Alternative

The No-Build Alternative would consist of a future scenario with no changes to transportation services or facilities in the Northeast Corridor, beyond the projects that are already committed. As a result, impacts to neighborhoods and community facilities would not occur under the No-Build Alternative. However, with the No-Build Alternative, neighborhoods and community facilities in the Northeast Corridor would not benefit from enhanced access to transit that would be associated with the implementation of the proposed Light Rail Alternative or Light Rail Alternative – Sugar Creek Design Option.

### 6.2.2 Light Rail Alternative

The following sections describe the direct impacts to neighborhoods, community services and environmental justice populations. The introduction of the physical elements of the proposed Light Rail Alternative, when proximate to neighborhoods and community facilities would have the potential to cause both positive and negative impacts. Impacts to environmental justice population communities of concern and transit-dependent populations within these neighborhoods would also occur and are identified in Section 6.2.2.3. The proposed Light Rail Alternative would include new stations, park-and-ride facilities, substations, a vehicle light maintenance facility, trackwork and an overhead catenary system located along neighborhoods within the corridor and would result in a permanent physical change of the corridor as well as changes to local traffic operations and street patterns.

Physical impacts include residential or business displacements, new access barriers, visual changes, or noise and vibration impacts. While some impacts would have a negative impact resulting from these physical changes, the Light Rail Alternative would provide mobility benefits to neighborhood residents by improving access to transit and destinations along the proposed Northeast Corridor as well as the existing LYNX Blue Line light rail service.

As part of the station area planning process for the proposed project, the *Design Criteria, Chapter 3, Blue Line Extension Urban Design Framework (UDF) (2009)* was developed to reduce potential impacts and integrate the proposed project into the context of the surrounding environment. The UDF specifies design treatments for the light rail trackway, fencing, retaining walls, embankments, bridges, traction power system components and landscaping. The UDF recommendations are an attempt to minimize the impact of the proposed project on its surroundings and to help integrate it with those surroundings. Station Area Plans are being developed for each station.

Citizens within the proposed project corridor have been involved throughout the planning process in an attempt to avoid or minimize potential impacts on surrounding neighborhoods. As part of this involvement, a Public Involvement Plan (PIP) was developed and implemented for the planning and design phases. Details on the PIP are included in Chapter 22.0.

#### 6.2.2.1 Neighborhoods

Neighborhoods were evaluated for the effects of the proposed Light Rail Alternative on travel patterns and accessibility; displacements and relocations; noise and vibration; visual and aesthetics; and cohesion. A general assessment was performed at the corridor level to identify direct effects to individual properties that do not constitute an overall impact to the entire neighborhood. The second portion of the evaluation specifically assesses impacts expected to affect the entire neighborhood. Neighborhoods that would experience no negative impacts are not included in this discussion.

Most of the residential areas for neighborhoods identified along the proposed project corridor are 500 feet or more from the proposed alignment, therefore reducing the potential for negative impacts. Given that the existing rail corridor and North Tryon Street/US-29 currently form the boundaries for several neighborhoods within the Northeast Corridor, the proposed Light Rail Alternative would not physically divide neighborhoods, reduce access to or disrupt the cohesion of existing communities. The alignment would also not be likely to alter neighborhood boundaries or the setting in which these neighborhoods exist. Additionally, access to neighborhoods would not be severed. However, visual, noise and vibration impacts would be expected to occur in some areas.

##### General Assessment

**Travel Patterns and Accessibility:** Given the distance of most neighborhoods from the proposed Light Rail Alternative, overall negative impacts to automobile travel patterns and accessibility are not anticipated within these neighborhoods. The proposed project would not sever or divide any streets within the corridor, as the majority of the proposed project would be constructed along existing railway and roadway. However, the portion of the proposed project that would be constructed within the median of North Tryon Street/US-29 would change traffic operations and patterns along this roadway. North Tryon Street/US-29 serves as an arterial route to local neighborhood streets; and with the project North Tryon Street/US-29 would be redesigned and rebuilt to create a complete urban street. The redesigned roadway will accommodate more diverse modes of transportation including light rail, buses, automobiles, pedestrians and bicyclists.

Generally, accessibility for transit patrons, bicyclists and pedestrians within the Northeast Corridor would be positively affected by the proposed project by providing another mode of transportation for residents and a more efficient option to automobile and bus travel. In addition, the frequency at which transit would be provided within this corridor would also increase with the proposed project. Pedestrian improvements (sidewalks, crossings, etc.) are also proposed and the City of Charlotte would identify desired improvements beyond direct station access in a separate project called the Northeast Corridor Infrastructure Project (NECI). Bicycle lanes are planned for North Tryon Street/US-29 as part of the proposed project and bicycle parking spaces are also planned at stations. Specific details on how travel

and accessibility would be altered as a result of the proposed project are included in Chapter 3.0: Transportation.

The proposed project would be grade-separated at 14 roadways to eliminate most conflicts between vehicular traffic and the proposed Light Rail Alternative. Nine of these grade-separations would be new structures and one would involve modification of an existing structure. In addition, new signals and the addition of turn lanes would also help to alleviate vehicular traffic conflicts resulting from the proposed project. However, construction of the proposed project within the median of North Tryon Street/US-29 would restrict left turns across the roadway from some side streets. Motorists in these restricted locations would be allowed to make turns and u-turns at signalized intersections. Motorists would be required to drive a minimal distance to make permitted turns. In addition, there are locations where the proposed project would cross streets and require motorists to wait for the light rail traffic to pass. Some of these locations already experience wait times for vehicles due to the existing railway traffic. Increased wait times at these locations, in addition to new crossing locations along North Tryon Street/US-29, are not expected to negatively affect vehicular travel patterns or accessibility within the corridor. As a result, accessibility for vehicles within the corridor is not anticipated to change significantly under the Light Rail Alternative.

There is potential for transit patrons to utilize neighborhood streets for parking. This potential exists at walk-up stations where park-and-ride lots would not exist, as well as at park-and-ride stations where dedicated parking could overflow. Overflow parking in neighborhoods would affect available on-street parking in neighborhoods, as well as introduce additional traffic. However, overflow parking on neighborhood streets along the LYNX Blue Line light rail service has not been an evident problem.

**Displacements and Relocations:** Property acquisitions would be required for development of the proposed Light Rail Alternative. Acquisitions would primarily be required for development of the station areas with parking facilities and at locations where the proposed alignment would transition from the existing rail corridor and North Tryon Street/US-29. Development of the proposed Light Rail Alternative would require the full and partial acquisition (including easements) of approximately 220 or 229 parcels, depending on the Sugar Creek Station Park-and Ride option selected. These acquisitions would total approximately 132 or 139 acres. These acquisitions would result in approximately 20 or 23 displacements, most of which would occur at industrial and commercial properties. Residential property would be acquired from the Mallard Creek Apartments in the University City South neighborhood, described in further detail in the next section.

**Noise and Vibration:** Noise monitoring was conducted at noise sensitive receptors within the neighborhoods immediately adjacent to the proposed alignment. A noise and vibration impact assessment was conducted and is detailed in Chapter 13.0: Noise and Vibration. While individual noise and vibration impacts may occur at various sites along the proposed project corridor, those individual impacts do not constitute an effect on the overall neighborhood, with the exception of noise and vibration impacts to the Pines Mobile Home Park in the Hidden Valley neighborhood, described in further detail in the next section.

**Visual and Aesthetics:** The proposed Light Rail Alternative would introduce a new visual element within or adjacent to many neighborhoods. However, concern for visual/aesthetic impacts are eliminated largely because of existing land uses (office buildings, historic warehouses, etc.) that screen residential areas from the proposed alignment and the industrial context of the existing rail corridor.

In addition, individual visual and aesthetic impacts may occur at various sites along the proposed project corridor. However, those individual impacts do not necessarily constitute an effect on the overall visual and aesthetic quality of the neighborhood. In one instance, the proposed project would change the visual context of homes located along the existing freight tracks within the Hampshire Hills neighborhood and result in a potential impact to approximately six homes along Leafmore Drive, Clintwood Drive, St. Anne Place and Prince Charles Street. The proposed Light Rail Alternative would require the removal of existing vegetation in this location, and the construction of a retaining wall and fencing in this location, but would not result in an impact to the visual context to the overall Hampshire Hill neighborhood. Details of the visual impacts are included in Chapter 7.0: Visual and Aesthetic Resources.

**Cohesion:** Generally, the proposed Light Rail Alternative would be located along neighborhood boundaries and/or along an existing transportation corridor. As a result, the proposed project would not create a new physical barrier to neighborhood residents or physically divide neighborhoods.

#### Neighborhood Assessments

An assessment of the effects of the proposed Light Rail Alternative for each neighborhood in the study area was undertaken with regards to travel patterns and accessibility; displacements and relocations; noise and vibration; visual and aesthetics; and cohesion. The following summarizes the assessment of impacts to neighborhoods that could be negatively affected by the proposed Light Rail Alternative. Neighborhoods that would experience no negative impacts are not included in this discussion.

**North Charlotte (NSA 44):** The proposed Light Rail Alternative would be located along the northern portion of the North Charlotte neighborhood, adjacent to the existing rail corridor and industrial, commercial and residential uses. Two stations for the proposed project would be located within the North Charlotte neighborhood, namely the 36th Street Station and the Sugar Creek Station.

Residential uses within this neighborhood are located within 100 feet of the proposed project (primarily homes along Bearwood Avenue and Howie Circle). Multi-family residential uses can be found approximately 150 feet from the proposed project, between North Davidson Street and the existing rail corridor. The remainder of the residential development within this neighborhood is located on the east side on North Davidson Street, approximately 150 feet or greater from the proposed project. The proposed Light Rail Alternative would be constructed primarily within existing rail right-of-way through North Charlotte.

North Charlotte is accessed primarily from North Davidson Street, 36th Street, Craighead Road and Sugar Creek Road. At-grade crossings with the rail corridor currently exist at 36th Street, Craighead Road and Sugar Creek Road; however, grade-separations would be constructed as part of the proposed project in these locations and would improve travel and accessibility within North Charlotte. In addition, the North Davidson Street and Sugar Creek intersection is currently unsignalized and would become signalized as part of the proposed project. The Light Rail Alternative is not expected to negatively change travel patterns or accessibility for North Charlotte residents. Access would be improved because of the grade separation of 36th Street and the railroad, eliminating delays related to train crossing. In addition, it is expected that North Charlotte residents would benefit from the increased access to transit and other transportation options provided by the Light Rail Alternative as the majority of the neighborhood would be located within one mile of the proposed project.

The Light Rail Alternative would not result in the displacement or relocation of residents within North Charlotte. Partial and full acquisitions would be required along the rail corridor where additional right-of-way would be needed for the alignment and where parcels would be needed for the development of the proposed stations. These properties are developed with industrial and commercial uses.

As part of the Noise and Vibration Impact Assessment, noise monitoring sites were selected on North Davidson Street and Bearwood Avenue. Comparing existing noise conditions against anticipated project-related noise, it was determined that noise impacts would not occur within North Charlotte.

Additionally, the proposed Light Rail Alternative would be visible from the North Charlotte neighborhood and the proposed project would result in the introduction of new visual elements. However, the views would not be significantly different from the existing views of the rail corridor and industrial areas and as a result, only potential visual/aesthetic impacts would occur. Due to the size of the North Charlotte Historic District and the multiple locations that the proposed project would be visible from, this would constitute a potential impact for the entire neighborhood. However, this impact would not be considered significant.

The proposed Light Rail Alternative would be located alongside the North Charlotte neighborhood, but the Light Rail Alternative would not create a new physical barrier to North Charlotte or physically divide the neighborhood. Therefore, neighborhood cohesion would not be altered by the proposed Light Rail Alternative.



**Hidden Valley (NSA 140):** The proposed Light Rail Alternative would be located within the median of North Tryon Street/US-29, primarily at-grade, along the southern and eastern portions of the Hidden Valley neighborhood. The alignment would be located approximately 500 feet or more from the majority of residential uses within this neighborhood. However, the Pines Mobile Home Park is located approximately 250 feet north of the proposed project. As part of the Noise and Vibration Impact Assessment, noise monitoring sites were selected on Lambeth Drive, at the Pines Mobile Home Park, and on Kingview Drive, within a residential subdivision adjacent to the corridor. Comparing existing noise conditions against anticipated project-related noise, it was determined that moderate noise impacts would occur at 26 residences within the mobile home park on North Tryon Street/US-29. Because the introduction of noise would occur in an area with existing high noise levels, this would constitute a potential impact with regards to noise on the Hidden Valley neighborhood.

**University City South (NSA 134):** The proposed Light Rail Alternative would be located along the western edge of the University City South neighborhood and through the UNC Charlotte campus. The majority of uses along this portion of North Tryon Street/US-29 are commercial, office and institutional, mostly associated with UNC Charlotte and CMC-University. Some single-family residential uses can be found on Hampton Church Road and multi-family residential uses can be found south of Mallard Creek Church Road, on the proposed alignment. While it is expected that residents would benefit from the increased access to transit and other transportation options provided by the Light Rail Alternative, the University City South neighborhood would experience potential impacts as a result of the proposed project. Specifically, residential displacements would occur where the Light Rail Alternative crosses the Mallard Creek Apartment property. Partial acquisition of this property would be necessary and would result in the removal of one full building and the partial removal of another. These acquisitions would result in the relocation of the tenants who lease apartments within this building.

Noise impacts would occur in eight locations in the Mallard Creek Apartment complex. However, these individual property impacts would not be considered an impact on the neighborhood as a whole.

In addition, the proposed project would be visible from residential uses at the Mallard Creek Apartment complex and potentially significant visual/aesthetic impacts would result as the visual character would change significantly.

**Harris-Houston (NSA 135):** The proposed Light Rail Alternative would be located along the western portion of the Harris-Houston neighborhood. The majority of the alignment through this neighborhood would be located through industrial and vacant property adjacent to Kirk Farm Fields Park. Residential uses can be found within Harris-Houston at the Queen's Grant Mobile Home Park, located along the eastern portion of the alignment, just south of I-485. The proposed project would be located approximately 400 feet from this residential use and access to this neighborhood would be redesigned to accommodate the proposed project. Residents within this portion of the neighborhood would retain access to their neighborhood along the new access roadway to the I-485/N. Tryon Station. Development of the proposed I-485/N. Tryon Station would occur within this neighborhood along the eastern side of North Tryon Street/US-29, just south of I-485. While it is expected that residents would benefit from the increased access to transit and other transportation options provided by the Light Rail Alternative, the Harris-Houston neighborhood would be subjected to visual and aesthetic impacts as a result of the proposed project. Specifically, the park-and-ride garage at the proposed I-485/N. Tryon Station would be visible from residential uses within the neighborhood. The introduction of a new visual element in a setting where other transportation elements (e.g., North Tryon Street/US-29 and I-485) are present would result in potential visual/aesthetic impacts to mobile homes located along Esplanade Street. However, the impact would not be significant due to the natural vegetative screen that would remain.

#### 6.2.2.2 Community Services and Social Service Providers

The development of transit projects (specifically rail) have the potential to delay emergency services when these vehicles are required to wait for the transit vehicle to cross an intersection. Several police and fire stations are located within the Northeast Corridor as well as a major medical center (CMC-University). A Preliminary Hazard Analysis will be conducted at 30 percent and 65 percent levels of design to further investigate and identify emergency service needs. In addition, CATS will coordinate with emergency

service providers to ensure that the design of the proposed project allows access for these services. Signal designs would be included as part of the proposed project to ensure that efficient emergency services are not impeded. Additional design measures are detailed in Chapter 16.0: Safety and Security.

Early design changes to bridge spans near CMC-University illustrate CATS' commitment to minimizing the impact to emergency services. Original bridge designs, and specifically retaining wall placement, created a potential impact to CMC-University's emergency and customer access. Additional engineering evaluation was undertaken and bridge approaches were adjusted to eliminate or avoid the closure of the CMC-University driveway from North Tryon Street/US-29.

The majority of the community facilities identified in Table 6-2 would experience a positive impact from increased access to transit and transportation choices. Two of these community facilities would experience potentially negative impacts from the proposed project. The following is a description of those potentially negative impacts.

A potential impact would result from the partial acquisition at the Crossroads Charter School. This acquisition would be at the rear of the parcel where the alignment would transition to North Tryon Street/US-29 and would consist of a minimal amount of property (approximately 10 percent of the entire parcel). The area of acquisition would be from an area that is currently used for parking and would not affect the use or functioning of this facility. Views of the school from North Tryon Street/US-29 would not be blocked or substantially altered other than the park-and-ride at the rear of the property. Therefore, the potential visual impact is not anticipated to be significant. A partial acquisition would also be required at the Zion Primitive Baptist Church on East Sugar Creek Road. The acquisition would consist of less than 15 percent of the entire parcel and the acquisition is not expected to affect the use or functioning of this facility.

Coordination between CATS and CMC-University was conducted during preliminary engineering to minimize proposed project impacts to this resource and maintain emergency access and patient entrances. A potentially significant visual impact would result at CMC-University, located at the intersection of W.T. Harris Boulevard and North Tryon Street/US-29, since the proposed project would block views of the medical center due to the proposed bridge over W.T Harris Boulevard. This could affect way-finding by non-emergency personnel in emergency conditions and patient visitors. In addition, partial acquisition on a portion of the parcel adjacent to North Tryon Street/US-29 would also be required. The acquisition would be minimal (less than 2 percent of the entire parcel) and would occur at a portion of the parcel that is not developed and would not affect the functioning use of CMC-University.

### 6.2.2.3 Environmental Justice

Overall, this proposed project would improve accessibility for all communities of concern including low-income, minority and transit-dependent populations. The specific impacts to communities of concern associated with this proposed project are outlined below. Overall, these impacts are minimal compared with the proposed project's benefits to the larger environmental justice populations including increased accessibility, a new mode choice and reduced travel times to/from Center City Charlotte.

The key criteria for an environmental justice analysis are whether or not adverse impacts identified in each of the environmental analysis categories are disproportionate within communities of concern. In other words, would the impacts within a minority or low-income community be appreciably more severe or greater in magnitude than those that would be experienced in non-minority or non low-income communities. Of the impacts described in the following sections, only the noise impacts to Pines Mobile Home Park (located within the Hidden Valley neighborhood) and Mallard Creek Apartments (located within the University City South neighborhood) would be considered adverse and disproportionate. The identified adverse impacts are generally capable of being mitigated and are expected to be reduced significantly with appropriate measures. These measures are outlined in Section 6.3.

#### Travel Patterns and Accessibility

With respect to transit service, the proposed Light Rail Alternative would provide a significant level of benefits for environmental justice populations, particularly the transit-dependent. The Light Rail Alternative would utilize an exclusive guideway that would provide increased reliability, increased service

frequencies and significant travel time savings over the No-Build Alternative. As an extension of the LYNX Blue Line light rail service, there would be an increase in transit accessibility as well as mobility to origins and destinations throughout the entire CATS system. Access would improve to employment centers along the existing LYNX Blue Line light rail service and within the Northeast corridor.

Three locations within communities of concern would be restricted to right-in/right out access only. The Light Rail Alternative would also have at-grade crossings with eight intersections within communities of concern. These roadway modifications would change travel patterns for both drivers and pedestrians; however, they would provide a safer environment. The impacts of the proposed physical roadway changes were analyzed to determine future level of service (LOS) at 55 intersections along the proposed alignment. Eighteen of these intersections are located in communities of concern. Eight of these are expected to experience an improved LOS with the Light Rail Alternative and four are expected to experience a decreased LOS. The four intersections located within communities of concern projected to experience a decreased LOS are as follows:

- Craighead Road and North Davidson Street
- Sugar Creek Road and Raleigh Street
- Eastway Drive and Curtiswood Drive
- North Tryon Street/US-29 and Northchase Drive

All four of the projected decreases would be to LOS E or F, and are thus considered significant and adverse. However, these four intersections would also experience a decreased LOS under the No-Build Alternative. Two of these are in the Sugar Creek/Rich Avenue neighborhood and two are in the Hampshire Hills neighborhood. However, these adverse impacts are not disproportionate within communities of concern. Pedestrian and bicycle LOS would improve under the Light Rail Alternative. These benefits would be realized throughout the corridor, including in communities of concern.

#### Displacements and Relocations

Overall, impacts resulting from acquisitions and displacements would not be adverse or disproportionate amongst minority and low-income communities under the Light Rail Alternative. No full property acquisitions of residences located within communities of concern are anticipated under the Light Rail Alternative. Twenty-one of the 25 full property acquisitions expected with the Light Rail Alternative are located within communities of concern. The majority of these acquisitions would be to commercial and industrial properties and five would be to vacant properties. These full acquisitions are potentially significant, and therefore adverse, but not disproportionate within communities of concern.

The Light Rail Alternative would require partial acquisition of approximately 195 or 204 parcels depending on the Sugar Creek Park-and-Ride option selected. Of these, four displacements would be required (three commercial/industrial uses and one residential use). These displacements are located within communities of concern and would be considered significant and adverse as these acquisitions would result in displacement. The three commercial displacements are located within a community of concern, along North Tryon Street/US-29, between Old Concord Road and University City Boulevard/NC-49 in “the weave” area. The displacement of these three businesses would be adverse. At this time, there is no visible evidence that these displacements are businesses that provide a unique or special service to a community of concern, therefore the impact is not disproportionate.

The residential displacement expected to result from a partial acquisition is located in a low-income community of concern (University City South neighborhood), at the Mallard Creek Apartments. This partial property acquisition would result from right-of-way needs and would involve the demolition of one apartment building within the complex, the demolition of a portion of another apartment building and the removal of a substantial portion of wooded area. CATS would compensate the property owner with fair market value of the property and relocation benefits would be paid to both the owner and tenants.

#### Community Services and Social Service Providers

Under the Light Rail Alternative, one community facility (a high school) located within a community of concern would experience impacts. Specifically, the Crossroads Charter High School (Hampshire Hills, Census Tract 15.06) would have a potential visual impact, as well as a potential impact related to a partial

acquisition. Though a new visual element would be introduced, other transportation elements are present (North Tryon Street/US-29). Additionally, the school would not be displaced and no physical alteration to the building would occur. This impact would not be considered adverse or disproportionate. The proposed Old Concord Road Station would be in close proximity to the Crossroads Charter High School, thus increasing the school's accessibility by transit. Zion Primitive Baptist Church (North Charlotte, Census Tract 14) is also located in a community of concern and would experience impacts. Specifically, the church would have a potential impact related to a partial acquisition. However, the church would not be displaced and no physical alteration to the building would occur. This impact would not be considered adverse or disproportionate. The partial acquisition of CMC-University would also occur within a community of concern (University City South, Census Tract 56.04), but the acquisition would occur on a portion of the parcel that is not developed. Therefore, the impact would not be considered adverse or disproportionate.

#### Neighborhoods

The Light Rail Alternative would not adversely or disproportionately affect neighborhoods with high concentrations of minority or low-income residents within the proposed project corridor. While some impacts would occur to specific properties, none of these impacts would collectively affect a neighborhood. The improved access to transit, more frequent service headways on rail and bus, and increased mobility to other destinations in the region would result in a positive impact to these communities of concern and transit-dependent populations.

**Noise and Vibration:** Moderate noise impacts are likely to occur at 32 locations within communities of concern as a result of the Light Rail Alternative. Of these, 26 are located in the Pines Mobile Home Park (Hidden Valley neighborhood) and the other six are located at the Mallard Creek Apartments (Buildings 2, 3, 4, 5, 6 and 7; University City South neighborhood). In addition, two buildings at Mallard Creek Apartments (Buildings 1 and 8) are expected to experience a severe noise impact as a result of the Light Rail Alternative. The severe noise impact at this location would be considered adverse. As no residential noise impacts are expected to occur outside of communities of concern under the Light Rail Alternative, these impacts would be considered disproportionate. Mitigation for this impact would be determined during final design and it is likely that this impact can be successfully mitigated.

The results indicate that vibration impacts would occur at one single-family residence in the Hampshire Hills neighborhood under the Light Rail Alternative. This neighborhood is considered a community of concern. The predicted impact is within one dB of the Federal Transit Administration (FTA) threshold and is therefore not considered a significant or adverse impact. Mitigation for this impact would be determined during final design and it is likely that this impact can be successfully mitigated. This impact would not be considered disproportionate.

**Visual and Aesthetics:** Ten potential impacts and one potentially significant, or adverse, impact are likely to occur to viewsheds within communities of concern under the Light Rail Alternative. The location and source of the potential impacts (introduction of a new visual element in a setting where similar visual elements are present) include:

- Alpha Mill Apartments (Optimist Park neighborhood) from the proposed elevated tracks and proposed retaining wall immediately behind this building.
- Herrin Brothers Coal and Ice Company (North Charlotte neighborhood) from the depression of 36th Street under the proposed light rail tracks and the proposed 36th Street Station.
- North Charlotte Historic District from a change in visual landscape associated with the view of the 25th Street Station, 36th Street Station, two bridges near 30th Street, and a bridge over Craighead Road.
- Hampshire Hills neighborhood from views of the proposed Light Rail Alternative, as well as a retaining wall that would be located along a portion of the proposed project corridor within Hampshire Hills.
- Businesses along North Tryon Street/US-29 between Old Concord Road and JW Clay Boulevard from bridges within the median of North Tryon Street/US-29 and from the potential to obstruct views of business signage.

- Crossroads Charter School (Hampshire Hills) from views of the proposed Old Concord Road Station and park-and-ride lot and proposed bridge over Old Concord Road.
- Toby Creek Greenway from an approximately 550-foot long bridge that would cross over this planned greenway resulting in disrupted views of a natural setting and resulting in vegetation removal along the bridge and light rail trackway. However, the visual character would be similar to existing trails located in the immediate vicinity.
- Kirk Farm Fields from the proposed Mallard Creek Church Station and park-and-ride lot that would be located immediately adjacent to this recreational facility. The impact is expected to be temporary because the trees and vegetation planted in this restored wetland are projected to grow and screen the views of the station and park-and-ride lot.
- Mallard Creek Greenway Extension where the proposed project would cross this planned greenway on an approximately 700-foot long bridge. This structure would disrupt views of a natural area but would not be out of character with other portions of the Mallard Creek Greenway that travels under major roadways in a largely urban environment. As a result, the visual character of the planned greenway would be similar to the other greenways within the Mecklenburg County Park and Recreation (MCPR) greenway system.
- Queen's Grant Mobile Home Park (University City North neighborhood) from the view of the proposed I-485/N. Tryon Station park-and-ride garage.

As noted previously, because many of these areas already house a rail corridor and/or major arterial roadway, the proposed light rail project elements would not be out of character with surrounding development and transportation uses. One potentially significant, or adverse, impact as a result of the Light Rail Alternative would occur within a community of concern at the Mallard Creek Apartments within the University City South neighborhood. Viewers residing in apartments along Michelle Linnea Drive who currently face a natural area would have views of the proposed Light Rail Alternative. However, these impacts to viewsheds would not be disproportionate amongst minority and low-income communities under the Light Rail Alternative. In addition, CATS would work with the property owner of Mallard Creek Apartments to develop landscape treatments along the trackway to minimize potential visual effects.

#### Community Outreach

A detailed Public Involvement Plan (PIP) was developed at the onset of the proposed LYNX BLE study process to actively seek public input throughout the planning and preliminary design of the proposed project. Various workshops and meetings, beginning in 2000 and continuing to the present, have afforded residents and business owners within communities of concern the opportunity to learn about the proposed project and to provide input. Additional detail regarding the PIP and the targeted Environmental Justice outreach efforts for the communities of concern is included in Chapter 22.0: Public Involvement and Agency Coordination.

### **6.2.3 Light Rail Alternative – Sugar Creek Design Option**

When compared to the Light Rail Alternative alignment, the Light Rail Alternative – Sugar Creek Design Option would have different impacts to two neighborhoods (Hampshire Hills and Hidden Valley) and one community facility. The impacts to these two neighborhoods are no greater than the impacts to those same neighborhoods with the proposed Light Rail Alternative.

#### **6.2.3.1 Neighborhoods**

As with portions of the Light Rail Alternative, the Light Rail Alternative – Sugar Creek Design Option makes use of a major arterial roadway. As a result, uses along the proposed Light Rail Alternative – Sugar Creek Design Option are predominately commercial and industrial, with residential uses set back from these transportation facilities. For most of the neighborhoods identified in the corridor, residential areas are primarily 500 feet or more from the proposed alignment, reducing the potential for negative impacts to neighborhoods while still providing access to transit for these residents.

An assessment of each neighborhood was undertaken with regards to effects of the proposed Light Rail Alternative – Sugar Creek Design Option on travel patterns and accessibility; displacements and relocations; noise and vibration; visual and aesthetics; and cohesion. A general summary of these



findings is as follows.

**Travel Patterns and Accessibility:** Given the distance of the proposed project from neighborhoods, negative impacts to travel patterns and accessibility are not anticipated. However, the portion of this design option that would be constructed within North Tryon Street/ US-29 would change traffic operations and patterns within the corridor. The changes described in Section 6.2.2.1 relative to intersection widening, changes to signal timing, elimination of median openings, etc. would be the same for the Light Rail Alternative – Sugar Creek Design Option with an additional mile of North Tryon Street/US-29 experiencing similar impacts. Therefore, traffic patterns and accessibility are not expected to experience negative impacts. It is also expected that the Light Rail Alternative – Sugar Creek Design Option would provide another mode of transportation for residents and improve accessibility for all modes.

**Displacements and Relocations:** Property acquisitions would be required for development of the proposed Light Rail Alternative – Sugar Creek Design Option. Acquisitions would primarily be required for development of the station areas with parking facilities and at locations where the proposed alignment would transition from the existing rail corridor to North Tryon Street/US-29. Development of the proposed Light Rail Alternative with the Sugar Creek Design Option would require the full and partial acquisition of 245 parcels. These acquisitions would result in approximately 33 displacements, most of which would occur at industrial and commercial properties. Residential property would be subject to displacement where portions of a multi-family apartment complex would be acquired, the same as with the proposed Light Rail Alternative. In total, the Light Rail Alternative – Sugar Creek Design Option would result in the acquisition of an additional 15 to 22 acres of property and an additional 10 to 13 displacements over the proposed Light Rail Alternative.

**Noise and Vibration:** As part of the Noise and Vibration Impact Assessment for the Light Rail Alternative – Sugar Creek Design Option, noise and vibration monitoring sites were selected within adjacent neighborhoods. Comparing existing noise conditions against anticipated project-related noise, it was determined that noise impacts would occur within the Hidden Valley neighborhood at the Pines Mobile Home Park, the same impacts that would occur with the Light Rail Alternative. One vibration impact at a residential home on St. Anne Place in Hampshire Hills would be avoided with this design option. No additional noise impacts would occur with this design option over the proposed Light Rail Alternative.

**Visual and Aesthetics:** The proposed Light Rail Alternative – Sugar Creek Design Option would not introduce a new visual element within adjacent neighborhoods as the majority of this design option is located through commercial and industrial areas. As a result, concerns for visual/aesthetic impacts are eliminated largely because of existing land uses (e.g., commercial uses) that screen residential areas from the proposed alignment and because of the existing visual context of an existing transportation corridor. The Light Rail Alternative – Sugar Creek Design Option would avoid the visual impact on residential homes in Hampshire Hills along Leafmore Drive, Clintwood Drive, St. Anne Place and Prince Charles Street.

**Cohesion:** Given that North Tryon Street/US-29 forms the boundaries for several neighborhoods in the Northeast Corridor, the proposed Light Rail Alternative – Sugar Creek Design Option would not physically divide neighborhoods, reduce access to or disrupt the cohesion of existing communities. The alignment would also not be likely to alter neighborhood boundaries or the setting in which these neighborhoods exist. Additionally, access to neighborhoods would not be severed. In general, the impacts to neighborhood cohesion are no different than the impacts from the proposed Light Rail Alternative.

### 6.2.3.2 Community Services and Social Service Providers

Overall, the proposed Light Rail Alternative – Sugar Creek Design Option would not negatively impact community facilities located within the proposed project corridor. Partial acquisition of the Crossroads Charter High School property would still be required and would constitute a potential impact. The portion of this facility that would need to be acquired would be different from the proportion required for the Light Rail Alternative due to the difference in the two alignments and station development. This acquisition would not affect access to the facility and adequate parking facilities would remain available on the site.

### 6.2.3.3 Environmental Justice

**Travel Patterns and Accessibility:** Transportation impacts under the Light Alternative – Sugar Creek Design Option are nearly identical to those of the Light Rail Alternative. Of the eight intersections within communities of concern which would have an improved LOS under the Light Rail Alternative, seven of them would also have an improved LOS under the Light Rail Alternative – Sugar Creek Design Option. Three of the four intersections that would have a decreased LOS under the Light Rail Alternative would also have a decreased LOS under the Light Rail Alternative – Sugar Creek Design Option. The fourth would have no change in LOS with this design option. The three projected decreases in LOS would be significant and adverse, but they are not disproportionate within communities of concern. Environmental justice populations, particularly the transit-dependent, would experience a great increase in transit mobility. Pedestrian and bicycle LOS under the Light Rail Alternative – Sugar Creek Design Option would be identical to the Light Rail Alternative, in other words, improved over the No-Build Alternative condition.

**Displacements and Relocations:** A total of 31 property acquisitions with displacements within communities of concern would be required under the Light Rail Alternative – Sugar Creek Design Option. Of these displacements, 23 would result from full acquisitions and eight would result from partial acquisitions. These displacements would be considered adverse and disproportionate impacts as they result in approximately 10 to 13 additional displacements within communities of concern over the proposed Light Rail Alternative.

**Community Services and Facilities:** The Light Rail Alternative – Sugar Creek Design Option would not result in additional impacts to community facilities over the Light Rail Alternative. There would be no adverse or disproportionate impacts to community services or facilities in communities of concern.

**Neighborhoods:** The Light Rail Alternative – Sugar Creek Design Option would not adversely affect communities within the proposed project corridor. There would be no adverse or disproportionate impacts to neighborhood cohesion in communities of concern.

**Noise and Vibration:** Moderate noise impacts are likely to occur to three residences within communities of concern as a result of the Light Rail Alternative – Sugar Creek Design Option. Two of these impacts, at the Pines Mobile Home Park (Hidden Valley neighborhood), would also occur under the Light Rail Alternative. The third is a single-family residence on North Tryon Street/US-29. As no noise impacts are expected to occur outside of communities of concern under the Light Rail Alternative, these impacts would be disproportionate and adverse.

No additional vibration impacts are predicted under the Light Rail Alternative – Sugar Creek Design Option. In addition, the predicted impact under the Light Rail Alternative would not occur since the Light Rail Alternative – Sugar Creek Design Option would not pass by the residence on St. Anne Place.

**Visual/Aesthetics:** Three potential visual impacts are identified for the Light Rail Alternative – Sugar Creek Design Option, but are not considered significant:

- Republic Steel Warehouse from the proposed alignment passing through the middle of this property in addition to views of the proposed station and park-and-ride lot associated with this option.
- Business along North Tryon Street/US-29 (Dorton Street to Old Concord Road) from bridges within the median of North Tryon Street/US-29 and from the potential to obstruct views of business signage.
- Crossroads Charter School (Hampshire Hills) from views of the proposed Old Concord Road Station and park-and-ride lot.

The first two potential impacts are unique to the Light Rail Alternative – Sugar Creek Design Option. The potential impact to the Crossroads Charter School would also occur with the Light Rail Alternative.

## 6.3 Mitigation

CATS has conducted extensive public information activities to inform residents and provide the opportunity for participation in evaluating the proposed project, station locations, environmental concerns, etc. Public presentations have been offered to the public at-large, community groups, public officials,

institutional officials, and local, state, and federal agencies. As a result of public involvement, several design decisions were made. Chapter 22.0: Public Involvement and Agency Coordination summarizes these activities and meetings. Public involvement will continue through the Final EIS and comments and concerns from area residents will continue to be solicited.

### 6.3.1 Light Rail Alternative

#### 6.3.1.1 Neighborhoods

Impacts to neighborhoods resulting from the proposed Light Rail Alternative will be reduced through a number of mitigation measures. Neighborhoods of particular concern include North Charlotte, Hidden Valley, University City South and Harris-Houston, that would be affected by displacements/relocations, changes to noise/vibration level and/or changes to the existing visual/aesthetic character. Mitigation measures that will be employed are as follows:

**Travel Patterns and Accessibility:** Additional traffic signals and modifications to traffic lanes will help mitigate the effects of the Light Rail Alternative on North Tryon Street/US-29, a primary thoroughfare along much of the proposed corridor. No additional mitigation, beyond what is listed in Chapter 3.0: Transportation is required.

Overflow parking in neighborhoods located near proposed stations will be monitored through visual survey to determine whether additional parking is needed. Additional parking would be added with the development of park-and-ride facilities within and near neighborhoods and existing parking would not be eliminated as a result of the proposed project. If overflow parking becomes an issue for adjacent neighborhood streets, local resources near the problematic stations will be assessed to determine whether additional dedicated or shared parking could be secured. If necessary, parking enforcement will be instituted, allowing only residents of particular neighborhoods to park on specified streets.

**Displacements and Relocations:** Where displacements and relocations are unavoidable, relocation services and payments will be provided. Property owners will be paid for property acquired and relocation procedures for displaced residents will be guided by the Uniform Relocation Assistance and Real Property Acquisition Policies Act. The Act requires that comparable replacement housing be available before displacements occur. Refer to Chapter 17.0: Acquisitions and Displacements for additional mitigation details.

**Noise and Vibration:** The FTA requires that mitigation for moderate impacts be incorporated into the proposed project when it is considered reasonable. For severe impacts, mitigation should be incorporated into a proposed project unless there are extenuating circumstances to prevent it. The goal is to gain substantial reductions in noise level. The most practical noise and vibration mitigation recommendations for properties affected by the Light Rail Alternative include rail vehicle skirts, sound barriers and sound insulation. Specific mitigation measures designed for each property will be proposed in the Final EIS based on a detailed noise assessment. Coordination with property owners regarding acceptable mitigation methods would occur prior to final design.

**Visual/Aesthetic:** Further coordination to finalize mitigation plans will occur for the property owners of Mallard Creek Apartments to develop landscape treatments, where practical, near the buildings that are closest to the trackway to minimize potential visual effects.

**Cohesion:** Neighborhood cohesion would not be negatively affected by the Light Rail Alternative. Therefore, mitigation measures are not needed.

#### 6.3.1.2 Community Services and Social Service Providers

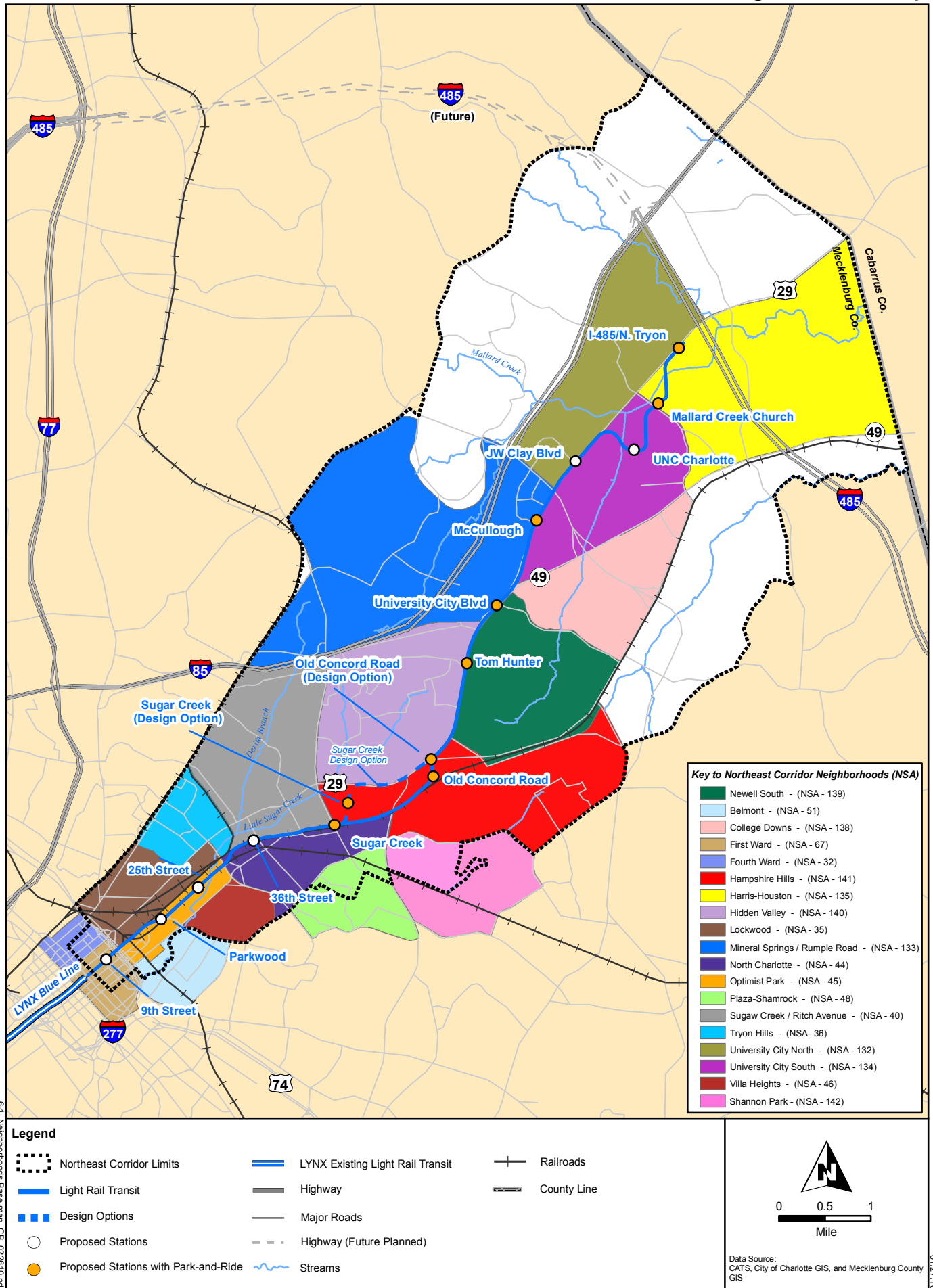
Mitigation measures will be necessary for potentially significant visual impacts at CMC-University that would result from the proposed Light Rail Alternative. CATS will continue to coordinate with CMC-University regarding design treatments and the type and location of directional signage.

### 6.3.1.3 Environmental Justice

As described previously, a detailed noise assessment will be undertaken to identify specific noise mitigation measures to address the potential adverse and disproportionate impacts to the Pines Mobile Home Park (Hidden Valley neighborhood) and Mallard Creek Apartments (University City South neighborhood).

### 6.3.2 Light Rail Alternative – Sugar Creek Design Option

Mitigation measures for impacts to neighborhoods, community services and environmental justice populations resulting from the proposed Light Rail Alternative – Sugar Creek Design Option will be the same as those described in Section 6.3.1.





# Environmental Justice and Transit Dependent Populations

